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HAZARDOUS
SITE CONTROL
DIVISION

Remedial Planning/ Field Investigation Team (REM/FIT)

ZONE II

CONTRACT NO.
68-01-6692

CH2M HILL
Ecology &
Environment

CERCLA Site Inspection

Levin-Richmond Terminal Corp.
Parr Canal Site
8th Street and Wright Avenue
Richmond, CA 94804
Contra Costa County

88205128

ecology and environment, inc.
120 HOWARD STREET, SUITE #640, SAN FRANCISCO, CALIFORNIA 94105, TEL. 415-777-2811
International Specialists in the Environment

AR0076

Purpose: CERCLA Site Inspection

Site: Levin-Richmond Terminal Corp.
Parr Canal Site
8th Street and Wright Avenue
Richmond, CA 94804
Contra Costa County

Site ERRIS ID Number: CAD981436363

Inspection ID Number: C(86)215

TDD Number: R9-8609-01

FIT Investigators: Douglas D. Russell
Mike Grant

Date of Inspection: August 14, 1986

Report Prepared by: Douglas D. Russell

Report Date: September 30, 1986

FIT Review : Patty Cook, 9-30-86

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1 INTRODUCTION

The Levin-Richmond Terminal Corporation (LRTC) Parr Canal site is located at the southwest corner of the intersection of Wright Avenue and Eighth Street in Richmond, California (see Figure 1, Site Location Map). The property is bounded by Wright Avenue on the north, by Eighth Street on the east, by the Harbor Channel on the south, and by Time Oil Co. (CAD009602343) on the west. It is a 9.5-acre vacant lot which is bisected north to south by the Parr Canal which has a surface area of approximately 2.5 acres.

Little is known about the ownership and occupant history of this property. The site was apparently used as part of one of the Kaiser shipyards during the 1940s. Since then, the site seems to have been occupied by several smaller businesses, and may also have been used as a storage facility for scrap metal. The FIT file reviews revealed sketchy, sometimes conflicting information on the previous occupants and owners of this site.

Sampling by various agencies has shown the site to have been contaminated with DDT, PCBs, asbestos, and heavy metals. The source of most of these contaminants is unknown. However, it has been reported that DDT-contaminated material was disposed of at this site.

On August 1, 1986, Ecology and Environment's Field Investigation Team (FIT) submitted a Preliminary Assessment (PA) on the LRTC to the EPA. EPA had instructed FIT to conduct this PA due to increased public awareness of possible site contamination, triggered by newspaper articles. After the PA was submitted, EPA recommended that FIT conduct a Site Inspection, due to the extent of contamination believed to be on-site, and due to the potential for exposure to the public and to waters of the Bay.

The purpose of this report is to summarize information gained from FIT investigative efforts as well as from pertinent agencies. Recommendations for further action are also provided with regard to the LRTC/Parr Canal site. The FIT contacted several federal, state, local, and private agencies and persons for information pertaining to this site.

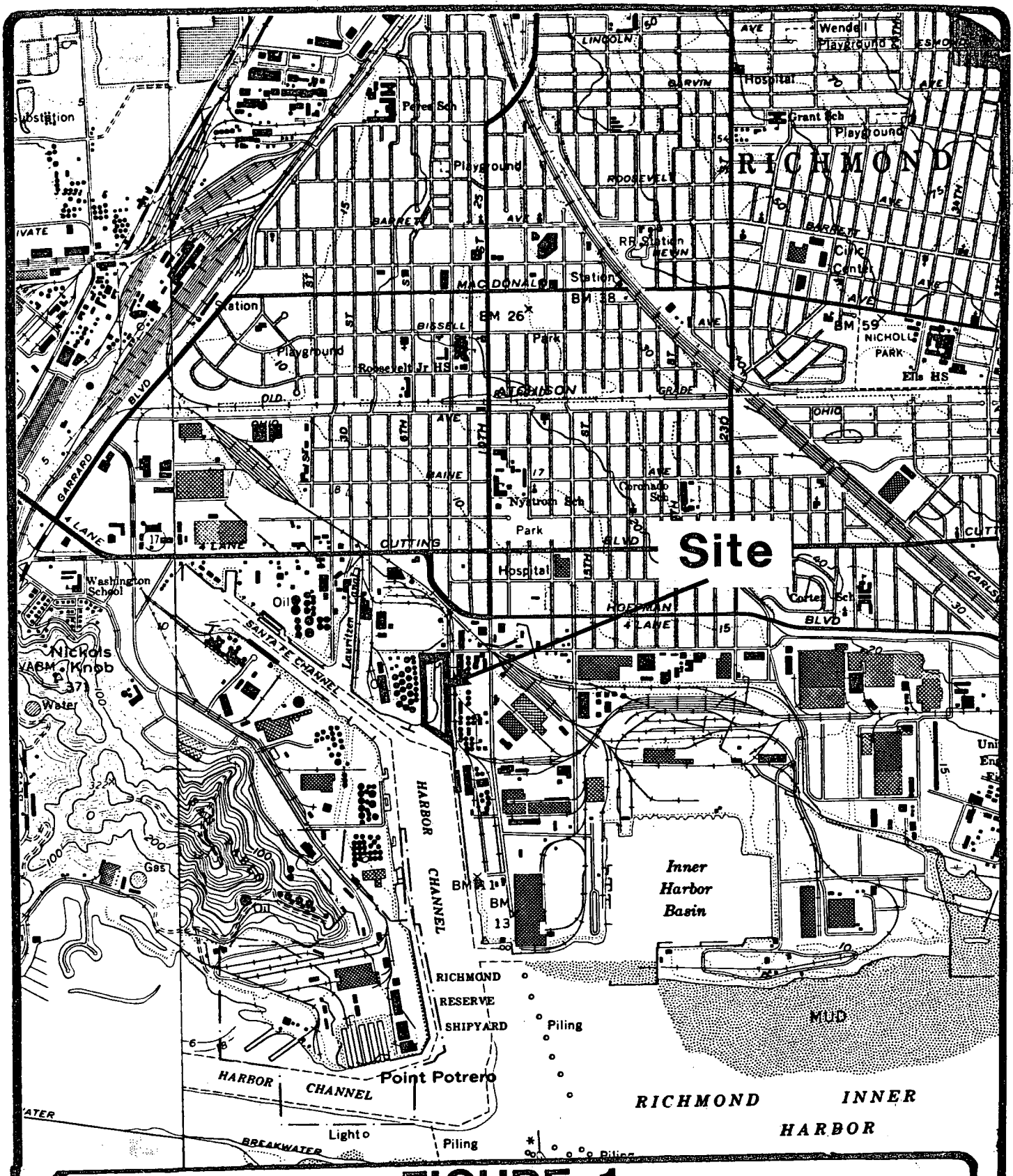

FIGURE 1
Site Location Map

Levin Richmond/Parr Canal Site

Eighth and Wright Avenue
Richmond, CA 94804
Contra Costa County

CALIF
QUADRANGLE LOCATION

SCALE 1:24000

Source: USGS "Richmond, CA" Quad.

2 SITE CHARACTERIZATION

2.1 Site History and Description

LRTC is a subsidiary of Levin Metals Corporation whose headquarters are in San Jose, CA. Levin Metals runs scrap-metal salvage operations in Richmond, Sacramento, Stockton, and San Jose. The firm also maintains a metal sales center in Santa Clara, CA, and has other subsidiary companies dealing with metals.

The LRTC was formed in May, 1981 when Levin Metals bought the properties along the Lauritzen and Parr Canals from the Parr Richmond Terminal Corporation (see Figure 1). Parr Richmond Terminal Corporation acquired these properties from Parr Industrial Corporation in 1961, which in turn acquired the site around 1947. From 1940 to 1947, the area is believed to have been occupied by one of the Kaiser shipyards used in the Government's wartime shipbuilding effort. The site ownership history from 1925 to 1940 is unknown. However, a document found in the DOHS file, summarized here, gives some clues to pre-1940 site history: Parr Canal is a geologically old channel connected to San Pablo Bay which was filled in by railroad companies in the late 1800s. Part of the land was apparently owned by the Richmond Navigation Company and part by Proctor and Gamble. Proctor and Gamble apparently leased land to a company called Permanente Metals until World War II, when the War Department took over the entire area. The land was apparently reclaimed from tidal marsh and mudflats and filled to its present elevation with earth and rock from the hills to the west (Refs. 4,14,& 15).

LRTC operates a bulk cargo terminal (consisting of the loading and unloading of bulk cargo from large ships) at 402 Wright Avenue (LRTC/United Heckathorn CAD980673560), which is adjacent to, but separate from, the Parr Canal site (CAD 981436363). From around 1947 to around 1965, several companies leased buildings at 402 Wright Avenue to manufacture and distribute pesticides. Apparently, hazardous material from the 402 Wright Avenue (United Heckathorn) site, as well as hazardous dredge material from the adjacent Lauritzen Canal, have been disposed of at the Parr Canal site.

The site consists of about 12 acres, 2.5 acres of which are taken up by the Parr Canal (see Figure 2). The Parr Canal is an extension of the Harbor Channel, which makes up the south border of the site (see Introduction for other site borders). The landward sides of the property are fenced, locked, and posted with "Warning-Hazardous Waste Storage Area" signs. As of September 23, 1986, there were no seaward signs with similar warnings. A large storm-sewer outfall draining areas adjacent to south Eighth Street empties into the north end of the Parr Canal.

During the early 1950s and possibly up to the mid 1960s, a small boat marina occupied the west shore of the Parr Canal. A map, dated around 1960 and obtained from California Department of Fish and Game (CDFG) files, shows several companies located

Figure 2

1,463,500 E
522,500 N
522,000 N
521,500 N
1,463,000 E
1,462,500 E
SOUTH EIGHTH STREET
WRIGHT AVENUE
PARR CANAL
HARBOR CHANNEL
FORMER LIMITS OF SCATTERED STOCKPILE
FORMER LOCATION OF CONSOLIDATED STOCKPILE
PIT 1
PIT 2
PIT 3
PIT 4
COMPOSITE SAMPLES
Piles
Pilings
Submerged
Gate
Pipe
EXPLANATION
TEST BORING LOCATION
MONITORING WELL LOCATION
PROPOSED MONITORING WELL LOCATION
depth of sample in feet below ground surface
summation of pp' isomers of DDD, DDE, and DDT in parts per million
GEOLOGIC CROSS-SECTION

NOTE:
GRID IS BASED ON CALIFORNIA COORDINATE SYSTEM, ZONE 3
FIELD SURVEY CONTROL BY TOWILL INC.
ELEVATIONS ARE BASED ON 1929 N.G.V.D.
TOPOGRAPHY BY TOWILL, INC. (SAN FRANCISCO, CA.) 3-8-85

0 100 200 feet

Contour Interval 1 Foot

Harding Lawson Associates
Engineers, Geologists & Geophysicists

Site Plan
Levin Richmond Terminal Corporation
Parr Canal Site
Richmond, California

PLATE 1

DRAWN	JOB NUMBER	APPROVED	DATE
DMR	8429,003.01	William Frizzell	6/85

ecology and environment, inc.

Figure 2

on-site. Besides the small boat marina, Eight Ball Trucking, Freese Barge, and Parr Terminal Wharf metal scrap yard were all shown on the site map. Prior to LRTCs remedial work on-site (see Remedial Action section), there were four small, unused wood-frame buildings, and two railroad spurs with railroad cars waiting to be scrapped. The entire site has low topographic relief and was covered with grasses, shrubs, and brush prior to LRTC's remedial work (Ref. 15).

2.2 Sources of Contamination

During pesticide manufacture and distribution at the United Heckathorn site from 1947 to 1965, losses of "active" ingredients were reported to be about one percent for dry materials and .75 percent for liquids (ref. 14). Liquid losses allegedly resulted from evaporation, and dry material losses allegedly resulted from wind dispersion and from adherence to containers. The plant reportedly handled about 500 tons of DDT a month and about 25 tons of other pesticides a month. Monthly losses calculated from the above quantities and percentages would be 10,000 pounds of DDT and around 500 pounds of other pesticides. The plant manager also reported one instance in which solvent was accidentally released due to an open valve (ref. 14).

Soil and Lauritzen Canal sediments from around the United Heckathorn site that were contaminated were apparently relocated to the Parr Canal site. Dredge material taken from the Lauritzen Canal was allegedly dumped at the Parr Canal site during the early 1960s. This material is believed to have been contaminated from operations at United Heckathorn, and was apparently used as fill around the Parr Canal. About 20 years later, during the fall of 1982, LRTC is said to have removed approximately 30 truckloads of soils and asphalt from the United Heckathorn site to the Parr Canal site. Apparently, this material was placed in stockpiles on the eastern half of the Parr Canal site (Ref. 15). There is no evidence of other hazardous material having been dumped on the Parr Canal site.

2.3 Contamination Investigations

On October 1, 1981, David Belk of the California Department of Health Services (DOHS) responded to an anonymous tip about three on-site ponds. Belk did not find evidence of the ponds but did notice "greyish/white fibrous clumps scattered throughout the area" (see DOHS report in Appendix D). Three samples of this material were taken, one of which was split with LRTC. Elevated concentrations of heavy metals and asbestos were found (see sample results in Appendix D).

LRTC's alleged removal of soil, asphalt, and concrete from the United Heckathorn site to the Parr Canal site was apparently done before LRTC became aware of the contamination problems. After this alleged contaminant disposal in 1982, soil

TABLE 1

SUMMARY OF HLA PARR CANAL SAMPLE RESULTS

April-May, 1984

-ten test borings (B1-B10) on east side.
  **DDT concentrations (summation DDD, DDE, DDT) ranging from none detected (detection limit =.1 ppm) to 155.1 ppm.

-excavating four test pits (P1-P4) on east side.
  **DDT concentrations (summation) ranging from .15 ppm to 133 ppm.
  **PCB concentrations ranging from none detected (detection limit 1 ppm) to 70 ppm.

February, 1985

-ten test borings (A-J) four on east side, six on west side.
  **DDT concentrations (summation) ranging from none detected (detection limit .1 ppm) to 399 ppm.
  **Lead concentrations ranging from 11 ppm to 1,900 ppm.

-install and sample four monitor wells (A-D) on east side and sample standing water from borings G, H, I, and J on the west side.
  **No priority pollutants found.
  **Range of concentrations of metals found as follows (in mg/L):

Arsenic	.005 to .01
Barium	.12 to .35
Chromium	.014 to .019
Cobalt	.22
Copper	.002 to .014
Molybdenum	.09 to .16
Nickel	.03 to .06
Selenium	.006 to .007
Thallium	.2
Zinc	.016 to .048

TABLE 1.0 (continued)

March, 1985

-four borings in Canal sediments

**Range of results in mg/L:

Arsenic	2.6 to 7.3
Barium	40 to 120
Chromium	41 to 53
Copper	30 to 60
Lead	80 to 230
Nickel	20 to 40
Vanadium	25 to 45
Zinc	50 to 190
DDT	5
DDD	2 to 9

June, 1985

-Bioassay by Aqua Terra (from wells A and B)
-toxicological research
-Waste Extraction Test (WET) for soluble lead and soluble DDT (from four soil samples; E,I,G,& J).
**WET soluble lead results 27 and 42 mg/L
**WET soluble DDT = none detected
-Parr Canal water analysis
**Zinc and compounds detected at .14 mg/L

at Parr Canal was subsequently tested for DDT and concentrations ranging from 2 to 250 ppm were found (Ref. 15). It is unknown who took these samples and from where on the site they were taken.

On August 31, 1983, Harding-Lawson Associates (HLA), retained by LRTC to characterize the contamination at the Parr Canal site, submitted a plan to relocate and cover contaminated soils at the site. After analyzing, characterizing, relocating, and covering the soils, LRTC finally gained approval from the DOHS to remove the soils to a Class I disposal facility. A total of 3,362 tons of soil were removed to the I.T. Benicia Class I dump (manifests are available in the CERCLIS file). Additionally, 300 cubic yards of soil had apparently been taken to the Casmalia Class I dump prior to the relocating and covering of the 3,362 tons of soil. Any material with levels of DDT greater than 10 ppm or lead over 50 ppm was reportedly considered contaminated and was taken to the Class I dumps (Ref. 15).

DOHS samples taken January 18, 1984 at the Parr Canal site were found to contain approximately 45% asbestos. Two other soil samples taken on January 24, 1984 revealed DDT concentrations (summation of DDD, DDE, and DDT) of 34.8 ppm and 2.4 ppm, respectively.

HLA took more samples from the Parr Canal site on April 27 and May 11, 1984. These samples were taken both in areas where LRTC had placed soil (which had since been removed to the Class I dumps) and in areas that LRTC had allegedly not disturbed. Elevated levels of DDT and PCBs were found that apparently did not correlate with the known contaminated levels of material that LRTC had relocated from the United Heckathorn site. HLA concluded that the contamination was present prior to LRTC's moving the soils and concrete from the United Heckathorn site.

A summary of HLA's investigation, including contaminant concentration ranges, is presented in Table 1.

2.4 Permits

LRTC has a permit from the United States Army Corps of Engineers enabling the firm to dredge in the Lauritzen Canal and Santa Fe Channel. It is a 10-year permit (No. 14475E53, modified by 14475E43A) which expires on October 19, 1992. No record could be found of the Parr Canal ever having been dredged. However, there has been one modification of this permit with regard to the Parr Canal. LRTC applied to the Corps of Engineers to put shoring and riprap along the Canal edge. The Corps of Engineers approved this modification.

A conditional-use permit for the use of the land was granted to the previous owner (Parr Richmond Terminal Corp.) in 1965 by the City of Richmond.

2.5 Remedial Action

The Parr Canal site has undergone considerable remedial activity. Three hundred cubic yards of contaminated soil were removed to the Casmalia Class I dump and 3,362 tons of contaminated soil were disposed of at the I.T. Benicia Class I dump in September, 1984. The entire site was then prepared for final capping by removing existing vegetation, grading, and compacting surface soils. A permeable synthetic geotextile membrane was placed directly on the surface and covered with 12 inches of crushed gravel. The final report on the Parr Canal site has not been submitted to-date (9/9/86).

LRTC plans to construct a building and possibly rail lines on-site, operations that LRTC maintains will require no soil removal. LRTC has a Personnel Safety Plan developed by George Ceasar, CIH, of EAL Corporation, to protect employees who could be exposed to contaminated soils during routine maintenance and soil excavations.

The embankment areas along the side of the Canal will be protected from erosion by the placement of riprap. The cover system will be inspected on a monthly basis. The four existing groundwater monitor wells on the east side of the site, and four new wells to be constructed on the west side of the site will be monitored semi-annually for the first three years and then, depending on the results of these samplings, annually for the following two years. If monitoring continues to show no contamination at the end of five years, monitoring will be discontinued.

No remedial activity has been proposed for the Canal sediments. The RWQCB has recently stated that remedial measures on the Parr Canal will only be undertaken as part of the United Heckathorn/Lauritzen Canal remedial activities. This is due to the fact that the concentrations of DDT in the Parr Canal sediments are low compared to those in the Lauritzen Canal and therefore it would not be feasible to remediate these canal sediments alone. The heavy metals in the Parr Canal sediments are not of concern to the RWQCB (Ref. 1).

3 ENVIRONMENTAL SETTING

3.1 Surrounding Area

The industrial area found along Richmond inner harbor surrounds this site on the south, west and east. The residential area of Richmond begins about three or four blocks north of the site. The population of Richmond is approximately 78,606.

San Francisco Bay extends into the site as the Parr Canal, which extends north from the Harbor Channel. According to Mike Rugg, Department of Fish and Game, there are no known environmental receptors (e.g. wetlands, critical habitats, endangered species, nature reserves, etc.) near the Parr Canal site.

The one-year, 24-hour rainfall for the Richmond area is approximately three inches. Net precipitation from November to April is 6.85 inches.

3.2 Geology

Thick deposits of Bay mud underlie the site, and between three and 11 feet of fill sit on top of the Bay mud. This fill is heterogenous and was probably imported from the hills to the west. The permeability of similar fill material from the nearby United Heckathorn site (approximately 1/4 mile west) was found to be 0.0001 centimeters per second (cm/sec). The permeability of the Bay mud at the Heckathorn site was found to be approximately .000007 cm/sec (Ref. 15). Under the Bay mud there appears to be between 300 and 500 feet of alluvial deposits (Ref. 16).

3.3 Hydrology

3.3.1 Surface Water

The San Francisco Bay extends up to this site as the Harbor Channel from which the Parr Canal, Santa Fe Channel, and the Lauritzen Canal are extensions. All surface runoff from the site flows directly into the Parr Canal.

3.3.2 Groundwater

According to well logs provided in HLA's report, the site is overlain with artificial fills varying in depth between three and 11 feet. Groundwater is found in this fill in some, but not all, on-site borings. The presence of water in the fill appears to be attributable to Bay water intrusion. The Bay mud underlying this fill is saturated with water (Ref. 15).

Contaminant migration to aquifers below the Bay mud is assumed to be unlikely because of the very low permeability of Bay mud. According to available sources, no groundwater within three miles of the site is used for domestic consumption or

irrigation. There are between 20 and 30 wells within three miles of the site, which the Department of Water Resources has recorded as cathodic protection wells, rather than production wells (17). Available records at the Contra Costa County Environmental Health Department do not show any private water systems dependent on groundwater in the Richmond area.

4 SUMMARY OF FIT INVESTIGATIVE EFFORTS

On August 14, 1986, FIT investigators Doug Russell and Mike Grant inspected the Levin-Richmond Terminal Corporation facilities. The site inspection began with a meeting, followed by a tour of the site and of areas with DDT contamination. Present at the meeting were:

-Thomas Peterson, Vice President and General Manager, LRTC
-Mike McCoy, Marketing Representative, LRTC
-Jim Cannon, Design Engineer, LRTC
-Stephen Peck, Attorney for LRTC
-Keith Howard, Attorney for LRTC
-William Frizzell, Associate Engineer, HLA
-Douglas Russell, Ecology and Environment, Inc.
-Mike Grant, Ecology and Environment, Inc.

Following the meeting, William Frizzell escorted Mike Grant and Doug Russell to the Parr Canal area. The site was fenced and locked. There were signs posted that read, in both english and spanish: "Caution, Hazardous Waste Storage Area; Unauthorized Persons Keep Out." Mr. Frizzell unlocked the gate and we began the tour. The site had little topographic relief and was completely covered with crushed gravel. We observed the synthetic geotextile membrane at the Canal edge, where the placement of the riprap had not yet been completed. Pictures of the site were taken and are presented in Appendix B.

5 HRS FACTORS

o Observed Release:

Levels of arsenic, barium, chromium, cobalt, copper, molybdenum, nickel, selenium, thallium, and zinc were found in groundwater samples on-site. All concentrations were below the STLCs and Drinking Water Standards (MCLs).

Analysis of Parr Canal water revealed zinc compound concentrations of .14 mg/l.

Though they do not constitute actual observed releases, the following heavy metals and DDT compounds were found in the canal sediments: arsenic, barium, chromium, copper, lead, nickel, vanadium, zinc, DDT, and DDD.

See Table 1 for levels of contaminants found in all sampling done by HLA.

o Direct Contact/Fire and Explosion:

There are no known cases of direct contact. Prior to the remedial work done on-site, the potential for direct contact with asbestos, PCBs, DDT, and heavy metals was high. Though the entire landward side of the site is fenced and locked, both employees with access and people entering the lot from the canal side may have been exposed to these contaminants. Currently, the likely exposure routes to the public would be consumption of contaminated organisms (mollusks, fish, etc.) from the adjacent Bay waters and people coming into contact with canal sediments.

o Waste Type:

The following compounds have been identified in samples taken from the site: DDT, DDD, DDE, heavy metals, asbestos, and PCBs.

o Waste Quantity:

There is no documentation available on the quantities of the contaminants found on-site.

o Groundwater:

According to the best available sources, the surrounding area is underlain by thick deposits of Bay mud which would inhibit contaminant migration to aquifers below this mud layer. In addition, the FIT investigation did not locate any uses of the groundwater for domestic or irrigation purposes within three miles of the site.

o Surface Water:

Runoff from the entire site drains directly into the Parr Canal and Harbor Channel. The Harbor Channel is an extension of the San Francisco Bay. The Parr Canal, the Harbor Channel, and the San Francisco Bay are all used for fishing, swimming, boating, aestnetic enjoyment, etc.

o Other Factors:

The contaminants found in the Parr Canal sediments are potentially of concern. This site, in all probability, will not score high enough for NPL inclusion, yet there still is a concern that the sediments pose a threat to human health and lower organisms. High levels of heavy metals, as well as DDT and DDD, have been found in the canal sediments. The pathway leading to their deposit has not been identified. These contaminants may have come from on-site areas that have not been well characterized, either through storm drain runoff via the outfall at the north end of the canal, or by mechanical action of tides and currents.

6 OTHER AGENCY INVOLVEMENT

The following agencies have been involved with the Parr Canal site:

o The RWQCB has been active in the Parr Canal contamination problems. Its concerns have been mainly with groundwater, surface water, and canal sediments. It drafted two Cleanup and Abatement Orders (Nos. 84-001 and 84-008) neither of which LRTC responded to sufficiently. Robin Breuer is currently the project leader at the RWQCB.

o The DOHS has also been active at the Parr Canal site. Its concerns are mainly with the contaminated soil. It drafted a Survey and Compliance Order which is now outdated. Claudia Willen is currently the project leader for the DOHS.

o The Department of Fish and Game has also been involved in the role of a reviewer. The Parr Canal waters and the wildlife it contains have been the concerns of the DFG. Mike Rugg has been the project leader.

o The Contra Costa County Environmental Health Department is also involved with this site, primarily to review and keep up-to-date on all activities. Dan Bergman and Ken Axe are project leaders.

7 CONCLUSIONS

The history of this site is not well documented. There have been several landowners and businesses that could have contributed to the contamination found on-site. Sampling has shown evidence of heavy metals, asbestos, PCBs, and DDT. There are two areas of concern at the Parr Canal site, the soils and the canal sediments.

SOILS:

Remedial activity, consisting of soil removal, has concentrated on protecting human health and the environment from the DDT on the Parr Canal site. These remedial measures did not address the asbestos, PCBs, and heavy metal contamination on the site. However, the asbestos is now immobilized due to the site having been covered with the geotextile membrane and crushed rock. (The heavy metals found in the soils and groundwater are the likely result of ship building and scrap-metal operations that have occurred in the area in the past.) It is presently unknown if the soluble lead extracted from the soil has been remediated. It is also unknown if the PCB contaminated soil has been removed or remediated. The permeable membrane covering the site will allow vertical migration of precipitation into the underlying fill; this creates the potential for contaminants in the fill to leach out laterally along the Bay mud into the canal.

CANAL and SEDIMENTS:

The canal water was found to contain 0.14 mg/l of zinc and related compounds. The effect of this level of zinc on the quality of the Bay waters, human health, or the environment is unknown. The canal sediments contain levels of arsenic, barium, chromium, copper, lead, nickel, vanadium, DDT, and DDD that are all above the STLCs set in the California Administrative Code, Title 22. The bioavailability and effect of the heavy metals on the quality of the Bay waters, human health, or the environment is presently unknown. There is significant controversy as to whether DDT is bioavailable in its present state in the sediments.

8 RECOMMENDATIONS

Due to the unknown occupancy history of the site, and to the wide variety of contaminants found, FIT makes the following recommendations:

o A potential responsible party (PRP) search be conducted to help further characterize the possible extent and sources of existing contamination. This PRP search will be conducted as part of the FIT Contra Costa County investigation.

o The potential human and environmental health effects from heavy-metal and DDT-contaminated canal sediments should be assessed. The RWQCB has recently proposed conducting a Clean-up and Abatement Study in the Richmond Harbor area. This study would be directed towards discovering which aquatic species are being contaminated and what the sources of the contamination are. The EPA and FIT should both be involved with this study at least in the role of review and assistance.

o The PCB-contaminated soil areas should be characterized and a determination should be made as to the potential effect on human health and on the environment. Sampling should be conducted to determine if precipitation and subsequent percolation and/or run-off could be contributing contaminants to the canal. FIT will prepare a sampling plan addressing this scope of work, if EPA deems this necessary.

o The entire Richmond harbor (land and water) may have varying levels of heavy metal, PCB, and asbestos contamination, due to the history of ship building and scrap-metal operations in the area. The area should be assessed with the focus on the human health and environmental health effects that these contaminants may have. FIT will further characterize this area in the Contra Costa County investigation and will make an assessment on the effects to human health and environmental welfare that these contaminants may pose.

9 REFERENCES

1 - Contact report between Doug Russell, FIT, and Robin Breuer, RWQCB, October 2, 1986.

2 - Letter from John L. Kallok, Montrose Chemical Corporation of California, to Beth Jines, DOHS. December 2, 1981.

3 - Moore, Clifford, Wolfe, Larson, & Trutner, Attorneys at Law, Attachment A, Request for file review to the Department of Fish and Game.

4 - Moore, Clifford, Wolfe, Larson, & Trutner, Attorneys at Law, Joint Pretrial Statement of All Parties, U.S. District Court for the Northern District, No. C 85 4776 SC, January 28, 1986.

5 - Department of Fish and Game, Inter-Departmental Communication to John Harrison, RWQCB, January 23, 1952.

6 - Department of Fish and Game, Pollution Complaint from Robert Jones, DFG to Ellis Berry, DFG, June 3, 1960.

7 - Department of Fish and Game, Inter-Departmental Communication, Fred Kemp to H. E. Pintler, DFG, August 11, 1960.

8 - Department of Fish and Game Memo from Fred Kemp, DFG to Donald Lollock, DFG, January 18, 1965.

9 - Abandoned Site Project Site Inspection, August 13,1980.

10 - EAL Corporation Analysis Report for Harding-Lawson Associates, December 7, 1981.

11 - Department of Health Services, Hazardous Waste Site Surveillance and Compliance Report, August 31, 1982.

12 - Department of Health Services, Memorandum from Richard Jackson to Charles White, October 17, 1983.

13 - Department of the Army, San Francisco District, Corps of Engineers, Notice of Authorization, November 12, 1982 and Permit, January 26, 1982.

14 - Regional Water Quality Control Board, Checking Program Report, June 15, 1960.

15 - Harding-Lawson Associates, Site Characterization and Remedial Action Plan, Parr Canal Site, June 27, 1985.

16 - California Division of Mines and Geology, Preliminary Report 19, Geological and Geophysical Investigations for Tri-Cities Seismic Safety and Environmental Resources Study, 1973.

17 - Contact Log Between Doug Russell, FIT and Betty Swatsenburg, DWR, September 12, 1986.

APPENDIX A

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 1 - SITE LOCATION AND INSPECTION INFORMATION

EPA

I. IDENTIFICATION

01 STATE	02 SITE NUMBER

II. SITE NAME AND LOCATION

01 SITE NAME (Legal, common, or descriptive name of site)	02 STREET, ROUTE NO., OR SPECIFIC LOCATION IDENTIFIER
LRTC / Parr Canal Site	8th and Wright Ave.

03 CITY	04 STATE	05 ZIP CODE	06 COUNTY	07 COUNTY CODE	08 CONG DIST
Richmond	CA	94804	Contra Costa		

09 COORDINATES LATITUDE	LONGITUDE	10 TYPE OF OWNERSHIP (Check one)
— — — — — . —	— — — — — — . —	☒ A. PRIVATE ☐ B. FEDERAL _____ ☐ C. STATE ☐ D. COUNTY ☐ E. MUNICIPAL ☐ F. OTHER _____ ☐ G. UNKNOWN

III. INSPECTION INFORMATION

01 DATE OF INSPECTION	02 SITE STATUS	03 YEARS OF OPERATION
8 14 86 (MONTH DAY YEAR)	☒ ACTIVE ☐ INACTIVE	1920s (BEGINNING YEAR) Present (ENDING YEAR) ☐ UNKNOWN

04 AGENCY PERFORMING INSPECTION (Check all that apply)

☐ A. EPA ☒ B. EPA CONTRACTOR Ecology + Env. Inc (Name of firm) ☐ C. MUNICIPAL ☐ D. MUNICIPAL CONTRACTOR _____ (Name of firm)

☐ E. STATE ☐ F. STATE CONTRACTOR _____ (Name of firm) ☐ G. OTHER _____ (Specify)

05 CHIEF INSPECTOR	06 TITLE	07 ORGANIZATION	08 TELEPHONE NO.
Douglas Russell	Env. Scientist	E+E	(415) 777-2911
09 OTHER INSPECTORS	10 TITLE	11 ORGANIZATION	12 TELEPHONE NO.
Mike Grant	Env. Scientist	E+E	(415) 777-2911
			( )
			( )
			( )
			( )

13 SITE REPRESENTATIVES INTERVIEWED	14 TITLE	15 ADDRESS	16 TELEPHONE NO
Tom Peterson	VP	402 Wright	(415) 232-4422
Mike McCoy	Marketing Rep.	402 Wright	(415) 232-4422
			( )
			( )
			( )
			( )

17 ACCESS GAINED BY (Check one)	18 TIME OF INSPECTION	19 WEATHER CONDITIONS
☐ PERMISSION ☐ WARRANT		

IV. INFORMATION AVAILABLE FROM

01 CONTACT	02 OF (Agency/Organization)	03 TELEPHONE NO.
		( )

04 PERSON RESPONSIBLE FOR SITE INSPECTION FORM	05 AGENCY	06 ORGANIZATION	07 TELEPHONE NO.	08 DATE
				/ / (MONTH DAY YEAR)

EPA FORM 2070-13 (7-81)

EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 2 - WASTE INFORMATION

I. IDENTIFICATION

01 STATE	02 SITE NUMBER

II. WASTE STATES, QUANTITIES, AND CHARACTERISTICS

01 PHYSICAL STATES *(Check all that apply)*

- [X] A. SOLID
- [ ] B. POWDER, FINES
- [ ] C. SLUDGE
- [ ] D. OTHER _____ (Specify)
- [ ] E. SLURRY
- [ ] F. LIQUID
- [ ] G. GAS

02 WASTE QUANTITY AT SITE
(Measures of waste quantities must be independent)

TONS ~2
CUBIC YARDS _____
NO. OF DRUMS ~

03 WASTE CHARACTERISTICS *(Check all that apply)*

- [ ] A. TOXIC
- [ ] B. CORROSIVE
- [ ] C. RADIOACTIVE
- [X] D. PERSISTENT
- [ ] E. SOLUBLE
- [ ] F. INFECTIOUS
- [ ] G. FLAMMABLE
- [ ] H. IGNITABLE
- [ ] I. HIGHLY VOLATILE
- [ ] J. EXPLOSIVE
- [ ] K. REACTIVE
- [ ] L. INCOMPATIBLE
- [ ] M. NOT APPLICABLE

III. WASTE TYPE

CATEGORY	SUBSTANCE NAME	01 GROSS AMOUNT	02 UNIT OF MEASURE	03 COMMENTS
SLU	SLUDGE			
OLW	OILY WASTE			
SOL	SOLVENTS			
PSD	PESTICIDES	~~?~~		
OCC	OTHER ORGANIC CHEMICALS			
IOC	INORGANIC CHEMICALS			
ACD	ACIDS			
BAS	BASES			
MES	HEAVY METALS			

IV. HAZARDOUS SUBSTANCES *(See Appendix for most frequently cited CAS Numbers)*

01 CATEGORY	02 SUBSTANCE NAME	03 CAS NUMBER	04 STORAGE/DISPOSAL METHOD	05 CONCENTRATION	06 MEASURE OF CONCENTRATION
	DDT				
	PCB				
	Asbestos				
	Heavy Metal				

V. FEEDSTOCKS *(See Appendix for CAS Numbers)*

CATEGORY	01 FEEDSTOCK NAME	02 CAS NUMBER	CATEGORY	01 FEEDSTOCK NAME	02 CAS NUMBER
FDS			FDS		
FDS			FDS		
FDS			FDS		
FDS			FDS		

VI. SOURCES OF INFORMATION *(Cite specific references, e.g., state files, sample analysis, reports)*

EPA FORM 2070-13 (7-81)

EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 3 - DESCRIPTION OF HAZARDOUS CONDITIONS AND INCIDENTS

I. IDENTIFICATION	
01 STATE	02 SITE NUMBER

II. HAZARDOUS CONDITIONS AND INCIDENTS

01 ☒ A. GROUNDWATER CONTAMINATION — 02 ☐ OBSERVED (DATE: _____) — ☒ POTENTIAL — ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: _____ — 04 NARRATIVE DESCRIPTION

heavy metals, Potential for PCB

01 ☒ B. SURFACE WATER CONTAMINATION — 02 ☐ OBSERVED (DATE: _____) — ☒ POTENTIAL — ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: _____ — 04 NARRATIVE DESCRIPTION

Potential for DDT and PCB, and heavy metal to leach into canal.

01 ☐ C. CONTAMINATION OF AIR — 02 ☐ OBSERVED (DATE: _____) — ☐ POTENTIAL — ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: _____ — 04 NARRATIVE DESCRIPTION

01 ☐ D. FIRE/EXPLOSIVE CONDITIONS — 02 ☐ OBSERVED (DATE: _____) — ☐ POTENTIAL — ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: _____ — 04 NARRATIVE DESCRIPTION

01 ☒ E. DIRECT CONTACT — 02 ☐ OBSERVED (DATE: _____) — ☐ POTENTIAL — ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: _____ — 04 NARRATIVE DESCRIPTION

Contaminated aquatic species

01 ☒ F. CONTAMINATION OF SOIL — 02 ☒ OBSERVED (DATE: _____) — ☐ POTENTIAL — ☐ ALLEGED
03 AREA POTENTIALLY AFFECTED: _____ (Acres) — 04 NARRATIVE DESCRIPTION

Asbestos, PCB, Heavy Metal, DDT

01 ☐ G. DRINKING WATER CONTAMINATION — 02 ☐ OBSERVED (DATE: _____) — ☐ POTENTIAL — ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: _____ — 04 NARRATIVE DESCRIPTION

01 ☐ H. WORKER EXPOSURE/INJURY — 02 ☐ OBSERVED (DATE: _____) — ☐ POTENTIAL — ☐ ALLEGED
03 WORKERS POTENTIALLY AFFECTED: _____ — 04 NARRATIVE DESCRIPTION

01 ☐ I. POPULATION EXPOSURE/INJURY — 02 ☐ OBSERVED (DATE: _____) — ☐ POTENTIAL — ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: _____ — 04 NARRATIVE DESCRIPTION

EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 3 - DESCRIPTION OF HAZARDOUS CONDITIONS AND INCIDENTS

I. IDENTIFICATION	
01 STATE	02 SITE NUMBER

II. HAZARDOUS CONDITIONS AND INCIDENTS (Continued)

01 ☐ J. DAMAGE TO FLORA — 02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION

01 ☐ K. DAMAGE TO FAUNA — 02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION (Include name(s) of species)

01 ☒ L. CONTAMINATION OF FOOD CHAIN — 02 ☒ OBSERVED (DATE: _____) ☐ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION

Fish + Mollusk samples show DDT in flesh

01 ☐ M. UNSTABLE CONTAINMENT OF WASTES (Spills/Runoff/Standing liquids, Leaking drums) — 02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: _____ 04 NARRATIVE DESCRIPTION

01 ☒ N. DAMAGE TO OFFSITE PROPERTY — 02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION

SF Bay sediment w/ DDT

01 ☐ O. CONTAMINATION OF SEWERS, STORM DRAINS, WWTPs — 02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION

01 ☒ P. ILLEGAL/UNAUTHORIZED DUMPING — 02 ☒ OBSERVED (DATE: _____) ☐ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION

Haz. DDT wastes brought to site in past.
(It was apparently unknown that it contained DDT)

05 DESCRIPTION OF ANY OTHER KNOWN, POTENTIAL, OR ALLEGED HAZARDS

III. TOTAL POPULATION POTENTIALLY AFFECTED: _____

IV. COMMENTS

V. SOURCES OF INFORMATION (Cite specific references, e.g., state files, sample analysis, reports)

EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION
PART 4 - PERMIT AND DESCRIPTIVE INFORMATION

I. IDENTIFICATION	
01 STATE	02 SITE NUMBER

II. PERMIT INFORMATION

01 TYPE OF PERMIT ISSUED (Check all that apply)	02 PERMIT NUMBER	03 DATE ISSUED	04 EXPIRATION DATE	05 COMMENTS
☐ A. NPDES				
☐ B. UIC				
☐ C. AIR				
☐ D. RCRA				
☐ E. RCRA INTERIM STATUS				
☐ F. SPCC PLAN				
☐ G. STATE (Specify)				
☒ H. LOCAL (Specify) Land-use				
☐ I. OTHER (Specify)				
☐ J. NONE				

III. SITE DESCRIPTION

01 STORAGE/DISPOSAL (Check all that apply)	02 AMOUNT	03 UNIT OF MEASURE
☐ A. SURFACE IMPOUNDMENT		
☐ B. PILES		
☐ C. DRUMS, ABOVE GROUND		
☐ D. TANK, ABOVE GROUND		
☐ E. TANK, BELOW GROUND		
☐ F. LANDFILL		
☐ G. LANDFARM		
☐ H. OPEN DUMP		
☐ I. OTHER (Specify)		

04 TREATMENT (Check all that apply)

- ☐ A. INCENERATION
- ☐ B. UNDERGROUND INJECTION
- ☐ C. CHEMICAL/PHYSICAL
- ☐ D. BIOLOGICAL
- ☐ E. WASTE OIL PROCESSING
- ☐ F. SOLVENT RECOVERY
- ☐ G. OTHER RECYCLING/RECOVERY
- ☐ H. OTHER (Specify)

05 OTHER

- ☐ A. BUILDINGS ON SITE

06 AREA OF SITE

12 (Acres)

07 COMMENTS

IV. CONTAINMENT

01 CONTAINMENT OF WASTES (Check one)

☒ A. ADEQUATE, SECURE ☒ B. MODERATE ☐ C. INADEQUATE, POOR ☐ D. INSECURE, UNSOUND, DANGEROUS

02 DESCRIPTION OF DRUMS, DIKING, LINERS, BARRIERS, ETC.

V. ACCESSIBILITY

01 WASTE EASILY ACCESSIBLE: ☐ YES ☐ NO

02 COMMENTS

VI. SOURCES OF INFORMATION (Cite specific references, e.g. state files, sample analysis, reports)

EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 5 - WATER, DEMOGRAPHIC, AND ENVIRONMENTAL DATA

I. IDENTIFICATION

01 STATE	02 SITE NUMBER

II. DRINKING WATER SUPPLY

01 TYPE OF DRINKING SUPPLY (Check as applicable)

	SURFACE	WELL
COMMUNITY	A. ☐	B. ☐
NON-COMMUNITY	C. ☐	D. ☐

02 STATUS

ENDANGERED	AFFECTED	MONITORED
A. ☐	B. ☐	C. ☐
D. ☐	E. ☐	F. ☐

03 DISTANCE TO SITE

A. _____ (mi)
B. _____ (mi)

III. GROUNDWATER

01 GROUNDWATER USE IN VICINITY (Check one)

☐ A. ONLY SOURCE FOR DRINKING ☐ B. DRINKING (Other sources available) COMMERCIAL, INDUSTRIAL, IRRIGATION (No other water sources available) ☐ C. COMMERCIAL, INDUSTRIAL, IRRIGATION (Limited other sources available) ☒ D. NOT USED, UNUSEABLE

02 POPULATION SERVED BY GROUND WATER _____

03 DISTANCE TO NEAREST DRINKING WATER WELL _____ (mi)

04 DEPTH TO GROUNDWATER	05 DIRECTION OF GROUNDWATER FLOW	06 DEPTH TO AQUIFER OF CONCERN	07 POTENTIAL YIELD OF AQUIFER	08 SOLE SOURCE AQUIFER
_____ (ft)	_____	_____ (ft)	_____ (gpd)	☐ YES ☐ NO

09 DESCRIPTION OF WELLS (Including useage, depth, and location relative to population and buildings)

all wells are for cathodic protection

10 RECHARGE AREA		11 DISCHARGE AREA	
☐ YES ☐ NO	COMMENTS	☐ YES ☐ NO	COMMENTS

IV. SURFACE WATER

01 SURFACE WATER USE (Check one)

☒ A. RESERVOIR, RECREATION DRINKING WATER SOURCE ☐ B. IRRIGATION, ECONOMICALLY IMPORTANT RESOURCES ☐ C. COMMERCIAL, INDUSTRIAL ☐ D. NOT CURRENTLY USED

02 AFFECTED/POTENTIALLY AFFECTED BODIES OF WATER

NAME:	AFFECTED	DISTANCE TO SITE
Parr Canal, Harbor Channel, San Fran. Bay	☒	0.1 (mi)
	☐	_____ (mi)
	☐	_____ (mi)

V. DEMOGRAPHIC AND PROPERTY INFORMATION

01 TOTAL POPULATION WITHIN

ONE (1) MILE OF SITE	TWO (2) MILES OF SITE	THREE (3) MILES OF SITE
A. _____ NO. OF PERSONS	B. _____ NO. OF PERSONS	C. 78000 NO. OF PERSONS

02 DISTANCE TO NEAREST POPULATION

0.1 (mi)

03 NUMBER OF BUILDINGS WITHIN TWO (2) MILES OF SITE

lots

04 DISTANCE TO NEAREST OFF-SITE BUILDING

0.1 (mi)

05 POPULATION WITHIN VICINITY OF SITE (Provide narrative description of nature of population within vicinity of site, e.g., rural, village, densely populated urban area)

Richmond population = 78,000

EPA FORM 2070-13 (7-81)

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POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 5 - WATER, DEMOGRAPHIC, AND ENVIRONMENTAL DATA

I. IDENTIFICATION	
01 STATE	02 SITE NUMBER

VI. ENVIRONMENTAL INFORMATION

01 PERMEABILITY OF UNSATURATED ZONE (Check one)

☒ A. $10^{-6} - 10^{-8}$ cm/sec ☒ B. $10^{-4} - 10^{-6}$ cm/sec ☐ C. $10^{-4} - 10^{-3}$ cm/sec ☐ D. GREATER THAN 10^{-3} cm/sec

02 PERMEABILITY OF BEDROCK (Check one)

☐ A. IMPERMEABLE (Less than 10^{-6} cm/sec) ☐ B. RELATIVELY IMPERMEABLE ($10^{-4} - 10^{-6}$ cm/sec) ☐ C. RELATIVELY PERMEABLE ($10^{-2} - 10^{-4}$ cm/sec) ☐ D. VERY PERMEABLE (Greater than 10^{-2} cm/sec)

03 DEPTH TO BEDROCK	04 DEPTH OF CONTAMINATED SOIL ZONE	05 SOIL pH	
_____ (ft)	2 (ft)	_____	

06 NET PRECIPITATION	07 ONE YEAR 24 HOUR RAINFALL	08 SLOPE		
		SITE SLOPE	DIRECTION OF SITE SLOPE	TERRAIN AVERAGE SLOPE
6.85 (in)	3 (in)	_____ %		_____ %

09 FLOOD POTENTIAL

SITE IS IN _____ YEAR FLOODPLAIN

10

☐ SITE IS ON BARRIER ISLAND, COASTAL HIGH HAZARD AREA, RIVERINE FLOODWAY

11 DISTANCE TO WETLANDS (5 acre minimum)

ESTUARINE: A. _____ (mi)

OTHER: B. _____ (mi)

12 DISTANCE TO CRITICAL HABITAT (of endangered species)

_____ (mi)

ENDANGERED SPECIES: _____

13 LAND USE IN VICINITY

DISTANCE TO:

COMMERCIAL/INDUSTRIAL	RESIDENTIAL AREAS; NATIONAL/STATE PARKS, FORESTS, OR WILDLIFE RESERVES	AGRICULTURAL LANDS	
		PRIME AG LAND	AG LAND
A. < 1 (mi)	B. _____ (mi)	C. _____ (mi)	D. _____ (mi)

14 DESCRIPTION OF SITE IN RELATION TO SURROUNDING TOPOGRAPHY

VII. SOURCES OF INFORMATION (Cite specific references, e.g., state files, sample analysis, reports)

EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 6 - SAMPLE AND FIELD INFORMATION

I. IDENTIFICATION

01 STATE	02 SITE NUMBER

II. SAMPLES TAKEN

SAMPLE TYPE	01 NUMBER OF SAMPLES TAKEN	02 SAMPLES SENT TO	03 ESTIMATED DATE RESULTS AVAILABLE
GROUNDWATER	X		
SURFACE WATER	X		
WASTE			
AIR			
RUNOFF			
SPILL			
SOIL	X		
VEGETATION			
~~OTHER~~ Fish	X		

III. FIELD MEASUREMENTS TAKEN

01 TYPE	02 COMMENTS

IV. PHOTOGRAPHS AND MAPS

01 TYPE ☐ GROUND ☒ AERIAL

02 IN CUSTODY OF LRTC (Name of organization or individual)

03 MAPS ☒ YES ☐ NO

04 LOCATION OF MAPS In Report

V. OTHER FIELD DATA COLLECTED (Provide narrative description)

VI. SOURCES OF INFORMATION (Cite specific references, e.g., state files, sample analysis, reports)

EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 7 - OWNER INFORMATION

I. IDENTIFICATION

01 STATE	02 SITE NUMBER

II. CURRENT OWNER(S) / **PARENT COMPANY** *(If applicable)*

Field	Current Owner	Field	Parent Company
01 NAME	Levin ~~[illegible]~~ RTC	08 NAME	Levin Metals
02 D+B NUMBER		09 D+B NUMBER	
03 STREET ADDRESS *(P.O. Box, RFD #, etc.)*	402 Wright	10 STREET ADDRESS *(P.O. Box, RFD #, etc.)*	130 Canal
04 SIC CODE		11 SIC CODE	
05 CITY	Richmond	12 CITY	Richmond
06 STATE	CA	13 STATE	CA
07 ZIP CODE	94804	14 ZIP CODE	94804
01 NAME		08 NAME	
02 D+B NUMBER		09 D+B NUMBER	
03 STREET ADDRESS *(P.O. Box, RFD #, etc.)*		10 STREET ADDRESS *(P.O. Box, RFD #, etc.)*	
04 SIC CODE		11 SIC CODE	
05 CITY		12 CITY	
06 STATE		13 STATE	
07 ZIP CODE		14 ZIP CODE	
01 NAME		08 NAME	
02 D+B NUMBER		09 D+B NUMBER	
03 STREET ADDRESS *(P.O. Box, RFD #, etc.)*		10 STREET ADDRESS *(P.O. Box, RFD #, etc.)*	
04 SIC CODE		11 SIC CODE	
05 CITY		12 CITY	
06 STATE		13 STATE	
07 ZIP CODE		14 ZIP CODE	
01 NAME		08 NAME	
02 D+B NUMBER		09 D+B NUMBER	
03 STREET ADDRESS *(P.O. Box, RFD #, etc.)*		10 STREET ADDRESS *(P.O. Box, RFD #, etc.)*	
04 SIC CODE		11 SIC CODE	
05 CITY		12 CITY	
06 STATE		13 STATE	
07 ZIP CODE		14 ZIP CODE	

III. PREVIOUS OWNER(S) *(List most recent first)* / **IV. REALTY OWNER(S)** *(If applicable; list most recent first)*

Field	Previous Owner	Field	Realty Owner
01 NAME	Parr Rich. Term. Corp.	01 NAME	
02 D+B NUMBER		02 D+B NUMBER	
03 STREET ADDRESS *(P.O. Box, RFD #, etc.)*	402 Wright Ave	03 STREET ADDRESS *(P.O. Box, RFD #, etc.)*	
04 SIC CODE		04 SIC CODE	
05 CITY	Richmond	05 CITY	
06 STATE	CA	06 STATE	
07 ZIP CODE	94804	07 ZIP CODE	
01 NAME		01 NAME	
02 D+B NUMBER		02 D+B NUMBER	
03 STREET ADDRESS *(P.O. Box, RFD #, etc.)*		03 STREET ADDRESS *(P.O. Box, RFD #, etc.)*	
04 SIC CODE		04 SIC CODE	
05 CITY		05 CITY	
06 STATE		06 STATE	
07 ZIP CODE		07 ZIP CODE	
01 NAME		01 NAME	
02 D+B NUMBER		02 D+B NUMBER	
03 STREET ADDRESS *(P.O. Box, RFD #, etc.)*		03 STREET ADDRESS *(P.O. Box, RFD #, etc.)*	
04 SIC CODE		04 SIC CODE	
05 CITY		05 CITY	
06 STATE		06 STATE	
07 ZIP CODE		07 ZIP CODE	

V. SOURCES OF INFORMATION *(Cite specific references, e.g., state files, sample analysis, reports)*

EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 8 - OPERATOR INFORMATION

I. IDENTIFICATION

01 STATE	02 SITE NUMBER

II. CURRENT OPERATOR (Provide if different from owner)

01 NAME	02 D+B NUMBER
LRTC	

03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE
402 Wright Ave.	

05 CITY	06 STATE	07 ZIP CODE
Richmond	CA	94804

08 YEARS OF OPERATION	09 NAME OF OWNER
5	Levin Rich. Term. Corp.

OPERATOR'S PARENT COMPANY (If applicable)

10 NAME	11 D+B NUMBER
Levin Metals	

12 STREET ADDRESS (P.O. Box, RFD #, etc.)	13 SIC CODE
810 Canal	

14 CITY	15 STATE	16 ZIP CODE
Richmond	CA	94804

III. PREVIOUS OPERATOR(S) (List most recent first; provide only if different from owner)

01 NAME	02 D+B NUMBER

03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE

05 CITY	06 STATE	07 ZIP CODE

08 YEARS OF OPERATION	09 NAME OF OWNER DURING THIS PERIOD

PREVIOUS OPERATORS' PARENT COMPANIES (If applicable)

10 NAME	11 D+B NUMBER

12 STREET ADDRESS (P.O. Box, RFD #, etc.)	13 SIC CODE

14 CITY	15 STATE	16 ZIP CODE

01 NAME	02 D+B NUMBER

03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE

05 CITY	06 STATE	07 ZIP CODE

08 YEARS OF OPERATION	09 NAME OF OWNER DURING THIS PERIOD

10 NAME	11 D+B NUMBER

12 STREET ADDRESS (P.O. Box, RFD #, etc.)	13 SIC CODE

14 CITY	15 STATE	16 ZIP CODE

01 NAME	02 D+B NUMBER

03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE

05 CITY	06 STATE	07 ZIP CODE

08 YEARS OF OPERATION	09 NAME OF OWNER DURING THIS PERIOD

10 NAME	11 D+B NUMBER

12 STREET ADDRESS (P.O. Box, RFD #, etc.)	13 SIC CODE

14 CITY	15 STATE	16 ZIP CODE

IV. SOURCES OF INFORMATION (Cite specific references, e.g., state files, sample analysis, reports)

EPA FORM 2070-13 (7-81)

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POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 9 - GENERATOR/TRANSPORTER INFORMATION

I. IDENTIFICATION

01 STATE	02 SITE NUMBER

II. ON-SITE GENERATOR

01 NAME	02 D+B NUMBER	
03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE	
05 CITY	06 STATE / 07 ZIP CODE	

III. OFF-SITE GENERATOR(S)

01 NAME	02 D+B NUMBER	01 NAME	02 D+B NUMBER
03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE	03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE
05 CITY	06 STATE / 07 ZIP CODE	05 CITY	06 STATE / 07 ZIP CODE
01 NAME	02 D+B NUMBER	01 NAME	02 D+B NUMBER
03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE	03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE
05 CITY	06 STATE / 07 ZIP CODE	05 CITY	06 STATE / 07 ZIP CODE

IV. TRANSPORTER(S)

01 NAME	02 D+B NUMBER	01 NAME	02 D+B NUMBER
03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE	03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE
05 CITY	06 STATE / 07 ZIP CODE	05 CITY	06 STATE / 07 ZIP CODE
01 NAME	02 D+B NUMBER	01 NAME	02 D+B NUMBER
03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE	03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE
05 CITY	06 STATE / 07 ZIP CODE	05 CITY	06 STATE / 07 ZIP CODE

V. SOURCES OF INFORMATION (Cite specific references, e.g., state files, sample analysis, reports)

EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 10 - PAST RESPONSE ACTIVITIES

I. IDENTIFICATION
01 STATE | 02 SITE NUMBER

II. PAST RESPONSE ACTIVITIES

01 ☐ A. WATER SUPPLY CLOSED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ B. TEMPORARY WATER SUPPLY PROVIDED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ C. PERMANENT WATER SUPPLY PROVIDED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☒ D. SPILLED MATERIAL REMOVED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
~~50 cy of highly contaminated soil and sludge~~

01 ☒ E. CONTAMINATED SOIL REMOVED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
3662 yards of contaminated soil

01 ☐ F. WASTE REPACKAGED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☒ G. WASTE DISPOSED ELSEWHERE — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☒ H. ON SITE BURIAL — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
DDT contaminated soil left on site

01 ☐ I. IN SITU CHEMICAL TREATMENT — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ J. IN SITU BIOLOGICAL TREATMENT — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ K. IN SITU PHYSICAL TREATMENT — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☒ L. ENCAPSULATION — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
geotatile permeable membrane

01 ☐ M. EMERGENCY WASTE TREATMENT — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ N. CUTOFF WALLS — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ O. EMERGENCY DIKING/SURFACE WATER DIVERSION — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ P. CUTOFF TRENCHES/SUMP — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ Q. SUBSURFACE CUTOFF WALL — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

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POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 10 - PAST RESPONSE ACTIVITIES

I. IDENTIFICATION
01 STATE | 02 SITE NUMBER

II PAST RESPONSE ACTIVITIES (Continued)

01 ☐ R. BARRIER WALLS CONSTRUCTED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ S. CAPPING/COVERING — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION geotextile permeable membrane over DDT soils

01 ☐ T. BULK TANKAGE REPAIRED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ U. GROUT CURTAIN CONSTRUCTED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ V. BOTTOM SEALED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ W. GAS CONTROL — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ X. FIRE CONTROL — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ Y. LEACHATE TREATMENT — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ Z. AREA EVACUATED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☒ 1. ACCESS TO SITE RESTRICTED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION Site is fenced and locked from landward sides

01 ☐ 2. POPULATION RELOCATED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ 3. OTHER REMEDIAL ACTIVITIES — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

III. SOURCES OF INFORMATION (Cite specific references, e.g., state files, sample analysis, reports)

EPA FORM 2070-13 (7-81)

EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 11 - ENFORCEMENT INFORMATION

I. IDENTIFICATION	
01 STATE	02 SITE NUMBER

II. ENFORCEMENT INFORMATION

01 PAST REGULATORY/ENFORCEMENT ACTION ☒ YES ☐ NO

02 DESCRIPTION OF FEDERAL, STATE, LOCAL REGULATORY/ENFORCEMENT ACTION

III. SOURCES OF INFORMATION *(Cite specific references, e.g., state files, sample analysis, reports)*

EPA FORM 2070-13 (7-81)

APPENDIX B

PA/SI CONTACT LOG

Facility Name: Levin-Richmond Term. Corp.
Facility ID: CAD 980673560

Name	Affiliation	Phone #	Date	Information
Robin Breuer	RWQCB	464-4223	7/10/86	I'll call before coming to review the files and fol ers.
Claudia Willen	DOHS	372-4416	7/10/86	There is an exter sive file. Also, couple of lawsuit pending. I will call to set up a meeting to review the file.
Dan Bergman	Contra Costa County Env. Health	372-4416	7/10/86	He has a file and chronological update on the 16 State Superfund sites. Refer to Ken Axe.
Mike Rugg	Dept. Fish and Game	707-944-2011	7/10/86	Involvement as review. Have fir file on United Heckatorn. File copied.
	Dept. Fish and Game	707-944-2011	7/15/86	File copied.
	Contra Costa Env. Health	372-4416	7/15/86	File copied.

PRELIMINARY ASSESSMENT CONTACT LOG

Facility Name: Levin-Richmond Term. Corp.
Facility ID: CAD 980673560

Name	Affiliation	Phone #	Date	Information
unknown	F.B.I.	553-7400	7/29/86	F.B.I. files are confidential to almost everyone. I should send a letter on EPA letter head with my requests to: Legal Section, F.B.I., 450 Golden Gate Avenue, S.F., CA 94102
Terry Rogers	U.S. Coast Guard	437-3087	7/29/86	No file informati is likely before 1980. He will lo into it and retur my call.
unknown	U.S. Army Corps of engineers	974-0443	7/29/86	Try Regulatory People who keep records on permit activity for dred ging. Also try- Trudy Reilly at 2 Main St., 9th Flr.
Terry Rogers	U.S. Coast Guard	437-3087	7/31/86	There have been t oil spill inciden in Lauritzen Cana since 1980. No records are kept before this. Oil spill report will be sent.
Rich Davidson	Richmond Public Works Dept.	620-6536	7/31/86	His dept. has nothing. I shoul try Building Dept and/or Planning Dept. (Nancy Kauf man or Tricia Murphy).

PRELIMINARY ASSESSMENT CONTACT LOG

Facility Name: Levin-Richmond Term. Corp.
Facility ID: CAD 980673560

Name	Affiliation	Phone #	Date	Information
	Planning Dept.	620-6706	9/02/86	Population of Richmond 78,606. Bria Cook is census person and may have more info. on smaller areas.
?	LRTC	232-4422	9/02/86	Two or three drums of waste oil and solvents were foun on-site and disposed of off-site. This oil was resultant from heavy equipment and wash parts oil draining
Dario LaVagie	Air Quality Control Board	771-6000	9/12/86	Prevailing wind is generally from the west or northwest. They have air monitoring stations in Richmond at 1065 - 7th and 1144 -13th They do not analyz for DDT, but might upon request.
Ken Axe	Contra Costa Country Health Department	372-2521	9/12/86	No small water systems in West County. Possibly, families put wells in during drought and have since bee abandoned.
Betty Swatsenbarg	DWR	916-322-7171	9/12/86	Richmond inner harbor has 20-30 well logs going three miles. They are cathodic protection wells.

CONTACT REPORT

AGENCY: Department of Fish and Game

ADDRESS:

PERSON CONTACTED: Mike Rugg

PHONE NO.: 707-944-2011

FROM: Doug Russell

TO: File

DATE: 9/2/86

SUBJECT: Levin-Richmond Parr Canal

CC:

The fish samples analysis revealed DDT concentrations in all fillets, below FDA action levels, whole body fish samples were the highest levels in the State. He is sending the results to me.

There are no wetlands, critical habitats, endangered species, or nature reserves near the Santa Fe Channel Area.

CONTACT REPORT

AGENCY: LRTC

ADDRESS: 402 Wright Avenue

PERSON CONTACTED: Tom Peterson, Vice-President and General Manager

PHONE NO.: 232-4422

FROM: Doug Russell

TO: File

DATE: 9/18/86

SUBJECT: Containers of PCB material and dredge info.

CC:

The PCB drums contained, to the best of his recollection, "PCB transformers and possibly switch gear from old equipment (cranes, etc.) that were on-site".

Dredging has occurred twice since 1981, once along Berth A and once along Berth B and some of A. Mike McCoy will look into the dates and quantities and return my call. He also should have info. on who did the dredging and where it was taken.

CONTACT REPORT

AGENCY: RWQCB

ADDRESS: 1111 Jackson St., Oakland

PERSON CONTACTED: Robin Breuer

PHONE NO.: 464-4223

FROM: Doug Russell

TO: File

DATE: 10/2/86

SUBJECT: Parr Canal sediments, C & A Orders, Aqua Terra study.

CC:

The Parr Canal sediments will not be addressed unless remediated at the time Lauritzen Canal sediments are remediated. PCB's in soil are DOHS concern. Heavy metals in sediments are not of concern. DDT in sediments are in low levels compared to Lauritzen Canal, and are not feasible to clean-up as a single project.

The Aqua Terra biological study is not being used as the basis for anything; it is bogus.

The two Clean-up and Abatement Orders were violated due to: reports not submitted on-time, site characterization was incomplete, and reports were insufficient.

APPENDIX C

FIELD PHOTOGRAPHY LOG SHEET

DATE August 14, 1986

TIME 11 (A.M.) (P.M.)

DIRECTION: N NNE NE ENE
E ESE SE SSE
(S) SSW SW WSW
W WNW NW NNW

WEATHER Sunny, Warm

SITE Parr Canal

PHOTOGRAPHED BY:

Mike Grant

SAMPLE ID# (if applicable)

DESCRIPTION: Picture taken from entrance gate in northwest corner of lot. Time Oil tank farm on right.

DATE August 14, 1986

TIME 11 (A.M.) (P.M.)

DIRECTION: N NNE NE ENE
(E) ESE SE SSE
S SSW SW WSW
W WNW NW NNW

WEATHER Sunny, Warm

SITE Parr Canal

PHOTOGRAPHED BY:
Mike Grant

SAMPLE ID# (if applicable)

DESCRIPTION: Picture taken from northwest corner of lot. Wright Avenue runs parallel on left. End of canal in middle on right.

FIELD PHOTOGRAPHY LOG SHEET

DATE August 14, 1986

TIME 10:30 (A.M.) (P.M.)

DIRECTION: N NNE NE ENE
E ESE SE SSE
(S) SSW SW WSW
W WNW NW NNW

WEATHER Sunny, Warm

SITE Parr Canal

PHOTOGRAPHED BY:

Mike Grant

SAMPLE ID# (if applicable)

DESCRIPTION: View along Parr Canal towards Harbor Channel and San Francisco Bay. Notice recent placement of riprapp (unfinished).

DATE August 14, 1986

TIME 10:30 (A.M.) (P.

DIRECTION: N (NNE) NE ENE
E ESE SE SSE
S SSW SW WSW
W WNW NW NNW

WEATHER Sunny, Warm

SITE Parr Canal

PHOTOGRAPHED BY:

Mike Grant

SAMPLE ID# (if applicable)

DESCRIPTION: View of north end of Parr Canal. Notice: riprapp, storm sewer outfall, railroad spur, and geotextile membrane under crushed rock.

APPENDIX D

On Oct 1, 1981, David Belk + Corinne Clin met Mr. E.E. Bridgewater, V.P. of Revin-Richmond Terminal, to gain access into the vacant lot by Time Oil.

We didn't find evidence of the 3 ponds that our informant mentioned. However, we spotted greyish/white fibrous clums scattered throughout the area. There were great concentration of the matter on the eastern side of the canal (near the RR track).

Three samples were taken. The third was splitted w. Mr. Bridgewater (DEB 003).

The site is secured.

IORITY ☐
xplain) _____

HML No. _____ To _____

HAZARDOUS MATERIALS SAMPLE ANALYSIS REQUEST

(Sample to be taken to RWQCB to be tested)

nT I: FIELD SECTION

llector _____ Date Sampled _____ Time _____ Hours

CATION OF SAMPLING :

Name _____ Tel. No. _____

Address _____
Number Street State Zip

HML No. Lab Only)	Collector's Sample No.	Type Of Sample*	FIELD INFORMATION**

alysis Requested: _____

Chain of Custody:

	Signature	Title	Inclusive Dates
1			
2			
3			
4			

Special Remarks _____
(e.g., duplicate sample given to company, etc.)

RT II: LABORATORY SECTION

eived By _____ Title _____ Date _____

ple Allocation: ☐ HML ☐ SCBL ☐ LBL ☐ Other _____ Date

alysis Required _____

dicate whether sample is sludge, soil, etc.; Use back of page for additional information.;

8002 (5/80) Orig.—Lab. Dup.—File Trip.—Inspector

15084-4497-80 3M CAM

BROWN AND CALDWELL
CONSULTING ENGINEERS
ENVIRONMENTAL SCIENCES DIVISION
1285 POWELL STREET
EMERYVILLE, CA 94608
PHONE (415) 428-2300

Lab No. 101L

Date Sampled 10/1/81
Date Received 10/20/81
Date Reported 11/30/81

Report To:
Ms. Robin Breuer
State of California
Regional Water Quality Control Board
San Francisco Bay Region
1111 Jackson Street, Room 6040
Oakland, California 94607

Laboratory Director

	Sample Description
1	Fibrous Soil - 002
L2	Fibrous Soil - 003A
1	Fibrous Soil - 001 (Hold, no analyses performed.)

Sample Log No.	101L1	101L2

ion Scan: See attached report from Metallurgical Laboratories, Inc.

tos: See attached report from EMS Laboratories.

Metallurgical Laboratories, Inc.
Chemists · Assayers · Spectrographers
4 HOWARD STREET • SAN FRANCISCO, CALIFORNIA 94103 • AREA CODE 415 863-8575

Spectrographic Analysis
(Semi-quantitative)

Submitted by: Brown & Caldwell
1255 Powell Street
Emeryville, California 94608
Attention: Mr. C. K. Trent

Date: November 18, 1981

Sample of: Products

P.O. No. 6638

Lab. No. 1508/1 & 2

SAMPLE MARK →	101L #1	101L #2
IRON %	5.00	Major
COPPER	300ppm 0.03	0.01
NICKEL	100ppm 0.01	0.008
CHROMIUM	2,000ppm 0.20	200 0.02
MOLYBDENUM	2.50	0.80
TUNGSTEN	8,000ppm 0.20	500 0.02
VANADIUM	0.005	0.001*
ZINC	2000 0.20	1500 0.15
COBALT *	0.001	0.001
MANGANESE	0.08	0.35
NIOBIUM	0.001*	0.005
TITANIUM	Major	Major
SILVER	20 0.002	0.0001
ALUMINUM	0.001	0.006
MAGNESIUM	3.00	3.00
CALCIUM	2.50	0.15
BERYLLIUM	0.35	0.08
BISMUTH		

SAMPLE MARK →	101L #1	101L #2
SODIUM %	2.00	0.10
POTASSIUM	0.40	0.01*
STRONTIUM	0.02	0.002
ZIRCONIUM	0.01	0.006
BORON	7000 0.70	0.001
BARIUM	200 0.02	
RARE EARTHS		
Antimony	600 0.06	

RECEIVED
NOV 19 1981
BROWN AND CALDWELL

*LESS THAN

METALLURGICAL LABORATORIES, INC.

By: Robert P. Reed

EMS Laboratories

Asbestos Bulk Sample Optical Analysis

Client Brown & Caldwell Date Nov. 2, 1981 P.O. No. 6649N

Laboratory I.D. #	4106-A	4106-B			
Sample Description	101L1	101L2			
Sample Appearance	Dark Brown, Fibrous, Inhomogeneous	Tan to Brown, Fibrous, Inhomogeneous			
Sample Treatment	Crushed, Mixed	Mixed, Ground			
Asbestos Present Type & Percent	Amosite Chrysotile Total 11% ± 3%*	Amosite 9% ± 3%			
Other Fibrous Materials Present	Mineral Wool	None			
Non-Fibrous Materials Present	Diatoms Granular Minerals	Granular Minerals			

alifornia —Health and Welfare Agency

Department of Health Services

RITY 2

(...in)

HML No. 8912

To

HAZARDOUS MATERIALS SAMPLE ANALYSIS REQUEST

FIELD SECTION

...ector Dick Burgard Date Sampled 1-18-84 Time Hours

...ON OF SAMPLING: Parr Richmond Terminal, Parr Canal Site Tel. No.

...ddress Third and Wright, Richmond 94805

Number Street State Zip

... No. (...e Only)	Collector's Sample No.	Type Of Sample*	FIELD INFORMATION**
12	DB 001	Soil & Fiber	

...Requested: Asbestos Analysis

...ustody:

Signature	Title	Inclusive Dates
[signature]	WMS II	1-18-84 – 1-18-84
[signature]	LAB ASST	1-18-84 –
		–
		–

...marks

(e.g., duplicate sample given to company, etc.)

LABORATORY SECTION

...By [signature] Title PHC III Date 7-18-84

...cation: ☐ HML ☐ SCBL ☐ LBL ☐ Other Date

...equired (Sent to AIHL)

** ...ether sample is sludge, soil, etc.; Use back of page for additional information.

LABORATORY SAMPLE ANALYSIS REQUEST

URGEN

Page____of

...ency Submitting Sample(s): OH ☐ DIS ☐ 2. Region ☐ District ☐ 3. Date Submitted 1-18-84

... of Submittor HAZARDOUS MATERIALS LABORATORY 5. Phone No. 40 · 310

...S Inspection/I.H. Investigation Identification: I.D. No. ____ Rpt. No. ____ Yr. ____ 205Z

... Date Laboratory Results Desired: 1-84

...mple Information:

...Name of Establishment PARR RICHMOND TERMI

...Address THIRD AND WRIGHT ST. RICHMOND, CALIF.

...No. Lab. Only	Field No.	Date Coll.	Type of Sample See Below*	Volume	Field Information	Analysis Requested
40089	001	-8	S/F EIL			ASBESTOS

* ...terial = M: Bag = B: Settled Dust = S: Grab Sample = G: Impinger = I: Bubbler = Bu: ESP = E: Filter Paper = F: Other – Write In.

...mments:

CAL/OSHA H-10

LABORATORY REPORT

TO: OH ☒ DIS ☐ Region ☐ District ☐

Name HML (Dick Burg...

1. DIS Inspection/I.H. Investigation Identification: I. D. No. | Rpt. No. | Yr.

2. Name of Establishment Parr Richmond Terminal

Address Third and Wright St., Richmond, CA

3. Date This Report: Mo. 01 Day 31 Yr. 84

4. Laboratory Results

Lab. No. For Lab. Use Only	Field No.	Laboratory Results
40089	DB 001	Contains 45 percent (plus or minus 15 percent) asbestos.

RECEIVED

Department of Industrial Relations
CAL/OSHA
BERKELEY

Signatures of Chemists Involved

William T. Smith, 1/27/84.

6. Signature of Supervising Chemist

Steven B. Hayward
RJS

TATE OF CALIFORNIA
EPARTMENT OF HEALTH SERVICES

HAZARDOUS MATERIALS
ANAGEMENT SECTION

HAZARDOUS WASTE

SURVEILLANCE AND COMPLIANCE REPORT

DATE 3-5-84

FIRM NAME Levin Richmond Terminal (Parr Canal Site) SITE CLASSIFICATION ☐ I ☐ II-1 ☐ II-2 ☐ III

DDRESS 402 Wright Ave. ☐ Other

Richmond, Ca 94804 SITE PERMIT NO. CAX 000015263

Purpose: This inspection was conducted to oversee collection of core samplings immediately offshore from the site and to check on security of the site.

Background: This site was last inspected on Jan. 24, 1984 by Dick Burgard and Dwight Hoenig. No violations in site maintenance or security were observed during that inspection.
Samples collected from the Parr Canal Site had:

DB#002 34.8 ppm DDT (µg/g)

DB 003 2.4 ppm DDT

On January 18, 1984 a sample was collected from the Parr Canal site for Asbestos analysis. Results showed 45% Asbestos ± 15%.

Persons Present: Bill Frizzell, Harding Lawson
Dick Burgard, TSCD

Sampling Activity: Five cores were sunk into Bay sediments 12 ft cores were obtained --- (four sections, 3 foot lengths) cores were very soft --- could not extrude and provide splits, on site. We agreed to have the cores sent to EAL to be extruded and split.

Observations: The fence at the North End of the 402 Wright Sight is down The fence is being repaired, however, a 24 hour guard is posted to prevent access by unauthorized persons. This is an acceptable alternative.

INSPECTOR Dick Burgard DATE 3-6-84

California Department of Health Services
Hazardous Materials Laboratory

HML # 8947 to 8948

LABORATORY REPORT
Chlorinated Pesticides and PCB's

Collector's Name Dick Brainard — Date Received by Laboratory 1/24/84

Sampling Location Levin Richmond Terminal pavement site. 5th & Wright, Richmond. — Collector's Sample # DB002 to DB003

Analytical Procedure: Sample(s) were extracted with organic solvents. Constituents were determined by gas chromatography with electron capture detector according to HML Methods (refer to AOAC, 13th Ed., 29.013).

HML #	8947	8948					Detection Limit/ Units
Collector's Sample #	DB002	DB003					
*Aldrin							0.1
*a-BHC							0.1
*b-BHC							0.1
*c-BHC							0.1
*g-BHC (Lindane)							0.1
*Chlordane							0.2
*4,4'-DDE	2.7 µg/g	–					0.2
*4,4'-DDD	1.1 µg/g	–					0.2
*4,4'-DDT	31 µg/g	2.4 µg/g					0.3
*Dieldrin							0.2
*Endosulfan I							0.2
*Endosulfan II							0.2
*Endosulfan sulfate							0.3
*Endrin							0.2
*Endrin aldehyde							0.2
*Heptachlor							0.1
*Heptachlor epoxide							0.1
*Toxaphene							1.0
*PCB's (calc. as)							
o,p'-DDT	1.8 µg/g	–					
Methoxychlor							0.1
PCNB							0.3
Perthane							0.2
Trithion							0.5

*Constituents on EPA priority pollutant list

Note: (-) = Not detected
(blank) = Not determined

TC

Analyst's Signature Ruth Chang — 2/10/84 (Date)

Signature of Supervising Chemist Norman Tow — 2/10/84 (Date)

A Report Prepared for

Levin Richmond Terminal Corporation
402 Wright Avenue
Richmond, California 94804

SITE CHARACTERIZATION AND REMEDIAL ACTION PLAN PARR CANAL SITE RICHMOND, CALIFORNIA

HLA Job No. 8429,003.02

by

William F. Frizzell
Civil Engineer - 33013

For
James C. Davies,
Principal Engineer

Harding Lawson Associates
7655 Redwood Boulevard, P.O. Box 578
Novato, California 94948
415/892-0821

June 27, 1985

Appendix A

LABORATORY REPORTS

RESULTS OF SOILS ANALYSES - TEST PITS

3, 1984
ding Lawson Associates

Report #2501
Page 2

ults : All results are given in ug/g or ppm

DDT summation

#	HL ID	DDE	opDDT	ppDDD	ppDDT	DDT	PCB
1-1	#1 @ 1'	0.13	ND(0.05)	0.25	0.07	.55	ND(1)
1-2	#1 @ 2'	0.15	ND(0.05)	0.72	0.06	.93	ND(1)
1-3	#1 @ 3'	0.12	0.11	0.17	0.29	.69	1.1
1-3 Dup	#1 @ 3'	0.15	0.12	0.22	0.35	.84	1.1
1-4	#2 @ 1'	9.2	1.2	24	9.0	43.5	12
1-5	#2 @ 2'	ND(0.5)	ND(0.5)	2.4	ND(0.5)	2.4	ND(1)
1-6	#2 @ 3'	0.05	0.05	0.09	0.14	.32	ND(1)
1-7	#2 @ 4'	0.06	ND(0.05)	0.09	ND(0.05)	.15	ND(1)
1-8	#3 @ 1'	19	11	88	35	133	88
1-8 Dup	#3 @ 1'	15	8.7	54	21	96.7	71
1-9	#3 @ 2'	0.63	ND(0.5)	1.4	0.46	2.49	22
1-10	#3 @ 3'	0.34	ND(0.5)	0.72	0.40	1.36	11
1-11	#3 @ 4'	0.10	ND(0.05)	0.48	0.13	.69	ND(1)
1-12	#4 @ 1'	0.41	0.23	0.41	2.9	3.94	1.
1-13	#4 @ 2'	1.9	2.4	1.3	5.8	11.4	11
1-14	#4 @ 3'	ND(0.05)	ND(0.05)	0.08	0.11	.19	ND(1)

ND = none detected, detection limits in ()

ments : All PCB found was identified as Aroclor 1254. In some cases higher
tection limits are given due to interferences from PCB or other chlorinated
compounds.

Submitted By :

Michael Lynch

Michael Lynch
Technical Director

RESULTS OF SOILS ANALYSES - BORINGS B1 through B10

EAL Corporation

Thermo Electron Corporation

2030 Wright Avenue
Richmond, California 94804
(415) 235-2633
(TWX) 910-382-8132

ANALYSIS REPORT

HARDING LAWSON ASSOCIATES
P O BOX 578
NOVATO CA 94947
ATTENTION: BILL FRIZZELL

DATE: 5-17-84
Samples Received: 5-11-84
EAL W.O. No. 48-5800
Purchase Order No. NONE

SAMPLE IDENTIFICATION		P,P' DDD	P,P' DDE	P,P' DDT
EAL	CUSTOMER	PPM	PPM	PPM
255-105-1	B-1 2.5-3.0'	<0.1	<0.1	0.3
255-105-2	B-1 4.0-4.5'	0.3	0.1	0.2
255-105-3	B-2 1.0-1.5'	<0.1	<0.1	<0.1
255-105-4	B-2 3.5-4.0'	<0.1	<0.1	<0.1
255-105-5	B-3 1.0-1.5'	<0.1	<0.1	<0.1
255-105-6	B-3 3.0-3.5'	<0.1	<0.1	<0.1
255-105-7	B-4 0.5-1.0'	0.2	<0.1	0.6
255-105-8	B-4 5.0-5.5'	<0.1	<0.1	<0.1
255-105-9	B-5 1.0-1.5'	5.2	9.9	140
255-105-10	B-5 3.0-3.5'	<0.1	<0.1	<0.1
255-105-11	B-6 0.5-1.0'	0.2	1.2	0.7
255-105-12	B-6 3.0-3.5'	1.1	0.7	5.9
255-105-13	B-7 2.0-2.5'	6.0	1.4	36
255-105-14	B-7 4.0-4.5'	0.1	<0.1	0.4
255-105-15	B-8 1.0-1.5'	<0.1	<0.1	<0.1
255-105-16	B-8 4.0-4.5'	<0.1	<0.1	<0.1
255-105-17	B-9 1.0-1.5'	<0.1	<0.1	1.6
255-105-18	B-9 4.0-4.5'	<0.1	<0.1	<0.1
255-105-19	B-10 1.0-1.5'	0.1	<0.1	0.6
255-105-20	B-10 4.0-4.5'	<0.1	<0.1	<0.11

George E. Dunstan
Program Manager

RESULTS OF SOILS ANALYSES - BORINGS A THROUGH J

EAL Corporation

Thermo Electron Corporation

2030 Wright Avenue
Richmond, California 94804
(415) 235-2633
(TWX) 910-382-8132

Harding Lawson Associates
P.O. Box 578
Novato, CA 94947
Attn: Bill Frizzell

April 9, 1985
Samples Received: 2/22/85
EAL W.O. No.: 485800-255-126

ANALYSIS REPORT
(Revised)

Sample Identification EAL	Customer	Lead (mg/kg)	p,p'DDT (mg/kg)	p,p'DDE (mg/kg)	p,p'DDD (mg/kg)
255-126-1	A @ 1.5	70	<0.1	<0.1	<0.1
255-126-2	A @ 5.5	11	<0.1	<0.1	<0.1
255-126-3	B @ 0.0	810	0.73	0.11	<0.1
255-126-4	B @ 5.0	13	0.12	<0.1	<0.1
255-126-5	C @ 1.0	78	0.10	<0.1	<0.1
255-126-6	C @ 5.5	15	<0.1	<0.1	<0.1
255-126-7	D @ 2.0	770	<0.1	<0.1	<0.1
255-126-8	D @ 5.5	29	<0.1	<0.1	<0.1
255-126-9	E @ 1.0	1,500	0.26	0.15	0.89
255-126-10	E @ 5.5	16	<0.1	<0.1	<0.1
255-126-11	F @ 1.0-2.5	56	0.44	0.13	0.63
255-126-12	F @ 3-4.5	120	0.41	0.14	1.9
255-126-13	G @ 0.0	110	0.89	0.23	0.32
255-126-14	G @ 3.5	140	240	10	49
255-126-15	H @ 1-2.5	400	23	3.5	3.5
255-126-16	H @ 5-6.5	180	4.4	0.78	1.1
255-126-17	I @ 1-2.5	1,900	8.9	0.77	1.6
255-126-18	I @ 6-7.5	110	0.21	0.13	0.69
255-126-19	J @ 1-2.5	81	350	19	30
255-126-20	J @ 5-6.5	33	1.5	<0.1	0.16

Sample Identification EAL	Customer	o,p DDT (mg/kg)	o,p DDE (mg/kg)	o,p DDD (mg/kg)
255-126-14	G @ 3.5	30	1.6	20
255-126-15	H @ 1 - 2.5	2.7	0.38	0.65
255-126-16	H @ 5 - 6.5	0.70	<0.1	0.26
255-126-17	I @ 1 - 2.5	0.67	<0.1	0.35
255-126-19	J @ 1 - 2.5	68	2.4	8.7

George E. Dunstan
Manager, Hazardous Waste Programs

GED/dss

RESULTS OF WASTE EXTRACTION TESTS

Results of the testing are summarized in Table 1. The results are reported as "mg/L in the WET extract." The results could be converted to a dry weight basis by multiplying the WET-soluble result by 10.

If you have any questions regarding this work, please contact us.

Submitted by:

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Staff Chemist

Approved by:

Stephen E. Nackord
Laboratory Supervisor

/co

Table 1. Summarized Analytical Results for "Parr Canal" Samples Submitted on May 28, 1985

	Descriptor, Lab No., and Results[1] (mg/L)			
	Parr Canal			
Parameter	E @ 1.0 ft 2-12-85 (6779-1)	G @ 3.5 ft 2-12-85 (6779-4)	I @ 1.0-2.5 ft 2-13-85 (6779-2)	J @ 1.0-2.5 ft 2-14-85 (6779-3)
Lead	27	--	42	--
4,4'-DDD	--	<0.01	--	<0.01
4,4'-DDE	--	<0.01	--	<0.01
4,4'-DDT	--	<0.01	--	<0.01

[1]Concentration in Waste Extraction Test extract.

RESULTS OF CANAL SEDIMENT ANALYSES

Table 2. Total CAM Metals Test Results for Parr Canal Sediment Samples

Parameter	Method Detection Limit (mg/Kg)	Descriptor, Lab No. and Results (mg/Kg)[1] SA (6719-1)	SB (6719-2)	SC (6719-3)	SD (6719-4)	SE (6719-5)
Antimony	20	ND[2]	ND	ND	ND	ND
Arsenic	0.5	2.6	4.5	3.1	7.3	3.1
Barium	20	40	80	60	120	40
Beryllium	10	ND	ND	ND	ND	ND
Cadmium	10	ND	ND	ND	ND	ND
Chromium	5	41	53	53	41	53
Cobalt	20	ND	ND	ND	ND	ND
Copper	10	40	55	60	30	55
Lead	20	230	140	130	80	120
Mercury	2	ND	ND	ND	ND	ND
Molybdenum	20	ND	ND	ND	ND	ND
Nickel	20	20	40	40	40	30
Selenium	10	ND	ND	ND	ND	ND
Silver	50	ND	ND	ND	ND	ND
Thallium	50	ND	ND	ND	ND	ND
Vanadium	10	25	45	45	30	40
Zinc	10	170	190	160	50	130

[1] Wet weight basis.
[2] ND--Analyte not detected in sample at or above listed method detection limit.

Table 3. Priority Pollutant Organochlorine Pesticides and Polychlorinated Biphenyls Test Results for Parr Canal Sediment Samples

Compound	Method Detection Limit (mg/Kg)	Descriptor, Lab No. and Results (mg/Kg)[1] SA (6719-1)	SB (6719-2)	SC (6719-3)	SD (6719-4)	SE (6719-5)
Organochlorine Pesticides						
Aldrin	1	ND[2]	ND	ND	ND	ND
alpha-BHC	1	ND	ND	ND	ND	ND
beta-BHC	1	ND	ND	ND	ND	ND
gamma-BHC	UTD[3]	--	--	--	--	--
delta-BHC	1	ND	ND	ND	ND	ND
Chlordane	20	ND	ND	ND	ND	ND
4,4'-DDD	1	2	9	2	ND	4
4,4'-DDE	1	ND	ND	ND	ND	ND
4,4'-DDT	1	ND	5	ND	ND	ND
Dieldrin	1	ND	ND	ND	ND	ND
alpha-Endosulfan	1	ND	ND	ND	ND	ND
beta-Endosulfan	1	ND	ND	ND	ND	ND
Endosulfan sulfate	1	ND	ND	ND	ND	ND
Endrin	1	ND	ND	ND	ND	ND
Endrin aldehyde	UTD	--	--	--	--	--
Heptachlor	1	ND	ND	ND	ND	ND
Heptachlor epoxide	1	ND	ND	ND	ND	ND
Toxaphene	30	ND	ND	ND	ND	ND
Polychlorinated Biphenyls						
PCB-1016	10	ND	ND	ND	ND	ND
PCB-1221	10	ND	ND	ND	ND	ND
PCB-1232	10	ND	ND	ND	ND	ND
PCB-1242	10	ND	ND	ND	ND	ND
PCB-1248	10	ND	ND	ND	ND	ND
PCB-1254	10	ND	ND	ND	ND	ND
PCB-1260	10	ND	ND	ND	ND	ND

[1] Wet weight basis.
[2] ND--Analyte not detected in sample at or above listed method detection limit.
[3] UTD--Unable to determine; reference material not available.
Note: No other Hall detector-responsive compounds were observed in the sample extracts.

RESULTS OF GROUND-WATER ANALYSES

Harding Lawson Associates — March 11, 1985
EAL W.O. No.: 455300-255-126

Sample Identification / Analysis	Units	259-126-45 Composite A+B	259-126-46 Composite C+D	259-126-47 Composite G+H
Dissolved Antimony	mg/L	<0.4	<0.2	<0.2
Dissolved Arsenic	mg/L	0.006	0.005	0.01
Dissolved Barium	mg/L	0.14	0.35	0.16
Dissolved Beryllium	mg/L	<0.001	<0.001	<0.001
Dissolved Cadmium	mg/L	<0.005	<0.005	<0.005
Dissolved Total Chromium	mg/L	0.016	0.014	0.018
Dissolved Cobalt	mg/L	0.22	<0.005	<0.005
Dissolved Copper	mg/L	0.014	<0.001	0.004
Dissolved Lead	mg/L	<0.05	<0.05	<0.05
Dissolved Mercury	mg/L	<0.0005	<0.0005	<0.0007
Dissolved Molybdenum	mg/L	<0.1	<0.04	0.16
Dissolved Nickel	mg/L	0.04	<0.02	0.03
Dissolved Selenium	mg/L	0.007	0.007	0.006
Dissolved Thallium	mg/L	0.2	<0.05	<0.05
Dissolved Vanadium	mg/L	<0.003	<0.003	<0.003
Dissolved Zinc	mg/L	0.048	0.034	0.024

Sample Identification / Analysis	Units	259-126-48 I	259-126-49 J
Dissolved Antimony	mg/L	<0.2	<0.2
Dissolved Arsenic	mg/L	0.007	<0.005
Dissolved Barium	mg/L	0.12	0.12
Dissolved Beryllium	mg/L	<0.001	<0.001
Dissolved Cadmium	mg/L	<0.005	<0.005
Dissolved Total Chromium	mg/L	0.016	0.019
Dissolved Cobalt	mg/L	<0.005	<0.005
Dissolved Copper	mg/L	0.002	0.004
Dissolved Lead	mg/L	<0.05	<0.05
Dissolved Mercury	mg/L	<0.0005	<0.0005
Dissolved Molybdenum	mg/L	<0.04	0.09
Dissolved Nickel	mg/L	<0.02	0.06
Dissolved Selenium	mg/L	<0.005	<0.005
Dissolved Thallium	mg/L	<0.05	<0.05
Dissolved Vanadium	mg/L	<0.003	<0.003
Dissolved Zinc	mg/L	0.016	0.048

RESULTS OF PARR CANAL WATER ANALYSES

Table 1. Summarized Results for Parr Canal Bay Water Sample (ALI 6792-1)

Parameter	Concentration (mg/L)
Antimony, & compounds	<0.2
Arsenic, & compounds	<0.01
Barium, & compounds	<0.2
Beryllium, & compounds	<0.005
Cadmium, & compounds	<0.005
Chromium (III), & compounds	<0.01
Cobalt, & compounds	<0.01
Copper, & compounds	<0.01
Lead, & compounds	<0.02
Mercury, & compounds	<0.0005
Molybdenum, & compounds	<0.04
Nickel, & compounds	<0.02
Selenium, & compounds	<0.01
Silver, & compounds	<0.01
Thallium, & compounds	<0.05
Vanadium, & compounds	<0.02
Zinc, & compounds	0.14